RECEIVED
CENTRAL FAX CENTER
MAR 17 2008

The listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1-12 (cancelled).

Claim 13 (currently amended) A method for encoding an audio signal comprising:
receiving the audio signal;
~~determining an inharmonicity index in dependence upon the received audio signal;~~
decomposing the audio signal using a plurality of bandpass auditory filters, each of the filters producing an output signal;
determining an envelope of each output signal using a Hilbert transform;
determining a pitch value of each envelope using autocorrelation;
determining an average pitch error for each pitch value by comparing the pitch value with the other pitch values;
calculating a pitch variance of the average pitch errors;
determining an inharmonicity index as a function of the pitch variance;
determining a masking threshold in dependence upon the inharmonicity index using a psychoacoustic model; and,
encoding the audio signal in dependence upon the masking threshold.

Claim 14 (cancelled)

Claim 15 (currently amended) A method for encoding an audio signal as defined in claim [[14]]13 wherein the inharmonicity index covers a range of 10 dB.

Claim 16 (original) A method for encoding an audio signal as defined in claim 15 wherein the inharmonicity index for a perfect harmonic signal has a zero value.

Claim 17 (currently amended) A method for encoding an audio signal as defined in claim [[14]]13 wherein the plurality of bandpass auditory filters comprises a gammatone filterbank.

Claim 18 (original) A method for encoding an audio signal as defined in claim 17 wherein a lowest frequency of the gammatone filterbank is chosen such that the auditory filter centered at the lowest frequency passes at least two harmonics.

Claim 19 (original) A method for encoding an audio signal as defined in claim 18 wherein the lowest frequency is set to twice the inverse of the median of the pitch values.

Claim 20 (original) A method for encoding an audio signal as defined in claim 18 wherein the psychoacoustic model is a MPEG psychoacoustic model.

Claim 21 (original) A method for encoding an audio signal as defined in claim 20 wherein a Tone-Masking-Noise Parameter of the MPEG-1 psychoacoustic model 2 is modified using the inharmonicity index.

Claims 22-35 (cancelled)

Claim 36 (previously presented) A method comprising:
receiving an audio signal;
decomposing the audio signal using a plurality of bandpass auditory filters, each of the filters producing an output signal;
determining an envelope of each output signal using a Hilbert transform;
determining a pitch value of each envelope using autocorrelation;
determining an average pitch error for each pitch value by comparing the pitch value with the other pitch values;
calculating a pitch variance of the average pitch errors;
determining the inharmonicity index as a function of the pitch variance;
using the inharmonicity index adjusting a psychoacoustic model;
determining a masking threshold using the adjusted psychoacoustic model; and,
providing the masking threshold.

Claim 37 (previously presented) A method as defined in claim 36 comprising: processing the audio signal in dependence upon the masking threshold.

Claim 38 (previously presented) A method as defined in claim 36 wherein the psychoacoustic model is a MPEG psychoacoustic model.

Claim 39 (previously presented) A method as defined in claim 38 wherein a Tone-Masking-Noise Parameter of the MPEG-1 psychoacoustic model 2 is modified using the inharmonicity index.

Claims 40-43 (cancelled).